

ABSTRACT

The invention relates to a semiconductor structure, especially for use in a semiconductor detector. The semiconductor structure includes a weakly doped semiconductor substrate (HK) of a first or second doping type, a highly doped drain region (D) of a second doping type, located on a first surface of the semiconductor substrate (HK), a highly doped source region (S) of the second doping type, located on the first surface of the semiconductor substrate (HK), a duct (K) extending between the source region (S) and the drain region (D), a doped inner gate region (IG) of the first doping type, which is at least partially located below the duct (K), and a blow-out contact (CL) for removing charge carriers from the inner gate region (IG). According to the invention, the inner gate region (IG) extends in the semiconductor substrate (HK) at least partially up to the blow-out contact (CL) and the blow-out contact (CL) is located on the drain end relative to the source region (S).